



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/690,334 | 10/21/2003 | Gary W. Kamerman | 710601-1010 | 2178 |
| 24504 | 7590 | 05/17/2007 | EXAMINER | |
| THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP | | | GEISEL, KARA E | |
| 100 GALLERIA PARKWAY, NW | | | ART UNIT | PAPER NUMBER |
| STE 1750 | | | 2877 | |
| ATLANTA, GA 30339-5948 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 05/17/2007 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|------------------------------|----------------------------|---------------------|--|
| | 10/690,334 | KAMERMAN, GARY W. | |
| | Examiner Kara E. Geisel | Art Unit 2877 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 February 2007.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-26,28-48 and 52-57 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 4-17,21-26,28-33,35-41 and 46-48 is/are allowed.

6) Claim(s) 1-3,18-20,34,42,44,45 and 52-57 is/are rejected.

7) Claim(s) 43 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received. .

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
5) Notice of Informal Patent Application
6) Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims rejected under Johnson et al. (USPN 7,050,215) have been considered but are moot in view of the new ground(s) of rejection.

The indicated allowability of claims 42, 44 and 52-53 is withdrawn in view of the newly discovered reference(s) to Lindberg et al. (USPN 5,748,308), and Fjarlie (USPN 4,193,691). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 18-20, 34, 42, 44-45, and 54-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindberg et al. (USPN 5,748,308), newly cited.

In regards to claim 1, Lindberg discloses a spectral correlator (fig. 1) comprising a specimen (column 1, lines 7-13; although the specimen is not shown, the invention is directed towards identifying and quantifying compounds in a biological sample, and therefore, the light R would be from a specimen such as a biological sample), and an optical device (20) configured to collect light from the specimen (R), the optical device having a wavelength spreading element configured to disperse (106a), based on wavelength a received first spectra of the light collected from the specimen, the optical device configured to optically determine a similarity of the dispersed first spectra of the light collected from the specimen and a second known spectra by

directly comparing the light to a representation of the second known spectra (108; column 2, lines 61-67, and column 4, line 64 - column 5, line 30).

In regards to claim 2, the optical device is configured to output a signal indicative of the similarity (R-1).

In regards to claim 3, the correlator further comprises a detection device (not shown, but after 102b) configured to sense the similarity signal and determine, based upon the similarity signal, whether a substance, represented by the second known spectra is present in the specimen (column 3, lines 19-26; "non invasive detection and quantification of specific components").

In regards to claim 18, Lindberg discloses a spectral correlator (fig. 1) comprising a specimen (column 1, lines 7-13; although the specimen is not shown, the invention is directed towards identifying and quantifying compounds in a biological sample, and therefore, the light R would be from a specimen such as a biological sample), an illuminating device configured to illuminate the specimen (as shown in fig. 4, an illuminating device 12, can illuminate a specimen in 16), an optical device (20) configured to filter light from the specimen using a spatial filter (108) indicative of a known spectra and to determine, based on the filtered light, the similarity of a received spectra defined by the light and the known spectra (column 2, lines 61-67, and column 4, line 64 - column 5, line 30), the optical device having a wavelength spreading element configured to disperse the spectra (106a), the filter configured to receive the dispersed spectra (108).

In regards to claim 19, the optical device is configured to output a signal indicative of the similarity (R-1).

In regards to claim 20, the correlator further comprises a detection device (not shown, but after 102b) configured to sense the similarity signal and determine, based upon the similarity signal, whether a substance, represented by the second known spectra is present in the specimen (column 3, lines 19-26; “non invasive detection and quantification of specific components”).

In regards to claim 34, Lindberg discloses a spectral correlator (fig. 1) comprising a specimen (column 1, lines 7-13; although the specimen is not shown, the invention is directed towards identifying and quantifying compounds in a biological sample, and therefore, the light R would be from a specimen such as a biological sample), means for receiving light reflected off and/or emitted by the specimen (light reflected or emitted is R and is received by 102a and 104a), means for separating the light into its component colors (106a), and means for optically correlating the separated light to determine a similarity of the separated light and a second known spectra (108), the correlating means having an optical filter for filtering the separated light (108), the optical filter indicative of the second known spectra such that the filtered light has an intensity indicative of the degree to which the spectra of the received light and the second known spectra are similar (column 2, lines 61-67, and column 4, line 64 - column 5, line 30).

In regards to claim 42, Lindberg discloses a spectral correlation method (using fig. 1) comprising receiving light from a specimen (R), separating a first spectra of the light into its component colors (via 106a), optically multiplying the separated first spectra with a representation of a known second spectra (using 108) as the light is passing through an optical component indicative of the known second spectra to obtain an optical signal indicative of the degree to which the first spectra and the second spectra are similar (column 2, lines 61-67, and

column 4, line 64 - column 5, line 50), and detecting the optical signal (column 3, lines 19-26; “non invasive detection and quantification of specific components”).

In regards to claim 44, the method further comprises providing an indication as to whether at least one substance is present in the specimen based on the optical signal (column 3, lines 19-26; “non invasive detection and quantification of specific components”).

In regards to claim 45, Lindberg discloses a spectral correlation method (using fig. 1) comprising receiving light from a specimen (R), separating the light into its component colors (via 106a), filtering the separated light with a spatial filter (108) indicative of a known spectra corresponding to at least one substance such that a spectra of the light is optically multiplied depending on a similarity between the spectra of the light and the known spectra (column 2, lines 61-67, and column 4, line 64 - column 5, line 30), determining whether the at least one substance is present in the specimen based on the filtered spectra (via R-1) and providing an indication as to whether the at least one substance is present in the specimen based on the determining step (column 3, lines 19-26; “non invasive detection and quantification of specific components”).

In regards to claim 52, Lindberg discloses a spectral correlator (fig. 1) comprising a specimen (column 1, lines 7-13; although the specimen is not shown, the invention is directed towards identifying and quantifying compounds in a biological sample, and therefore, the light R would be from a specimen such as a biological sample), and an optical device configured to collect light from the specimen (light R collected by 102a and 104a) and to optically determine a similarity of a received first spectra of the light collected from the specimen and a second known spectra by directly comparing the light to a representation of the second known spectra (108;

column 2, lines 61-67, and column 4, line 64 - column 5, line 30), the optical device configured to focus all discrete wavelength lines of the spectra to the same spot (via 106b focused at 104b).

In regards to claim 54, the optical device has a spatial filter (108) indicative of the second known spectra, the filter configured to receive and filter the dispersed first spectra (from 106a).

In regards to claims 55-57, the filter optically multiplies the dispersed light based on the similarity (column 2, lines 61-67, and column 4, line 64 - column 5, line 50).

Claim 53 is rejected under 35 U.S.C. 102(b) as being anticipated by Fjarlie (USPN 4,193,691), newly cited.

In regards to claim 53, Fjarlie discloses a spectral correlator (fig. 1) comprising a specimen (column 1, line 65 - column 2, line 5), and an optical device configured to collect light from the specimen (10) and to optically determine a similarity of a received first spectra of the light collected from the specimen and a second known spectra by directly comparing the light to a representation of the second known spectra (12, column 2, lines 5-50), the optical device configured to focus all discrete wavelength lines of the spectra to a single detector (via 14 to detector 17).

Allowable Subject Matter

Claims 4-17, 21-26, 28-33, 35-41 and 46-48 are allowed over the prior art of record for the reasons set forth in the previous Office Action (paper number 20060808).

Claim 43 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 43, the prior art of record, taken alone or in combination, fails to disclose or render obvious a spectral correlation method comprising comparing a value indicative of the measured intensity to a threshold and providing an indication as to whether at least one substance is present in the specimen based on the comparing step, in combination with the rest of the limitations of claim 43.

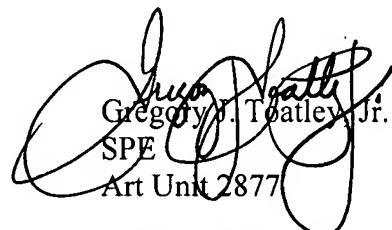
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kara E Geisel whose telephone number is **571 272 2416**. The examiner can normally be reached on Monday through Friday, 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on **571 272 2800 ext. 77**. The fax phone number for the organization where this application or proceeding is assigned is **571 273 8300**.

Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gregory J. Toatley, Jr.
SPE
Art Unit 2877

Gregory J. Toatley, Jr.
Supervisory Patent Examiner

KC
KEG
May 11, 2007